

CLAIMS

1. A method to release, by means of a Path_Tear Message, a Label Switched Path (LSP) established between linked routers (A, B, C, D, E) of a telecommunication network,

5 said routers being linked in cascade according to a Main Path (AB, BC, CD, DE) and being further linked in another order according to at least one Detour Path (ac, ce, bd),

characterized in that said Path_Tear Message includes a tag indicating, to the router receiving said Path_Tear Message, whether said Path_Tear Message should be immediately forwarded
10 towards a downstream-located router.

2. The release method according to claim 1, characterized in that said Path_Tear Message is received, in the receiving router, via a said Detour Path (ac, ce, bd) linking an upstream-located router
15 to said receiving router.

3. The release method according to claim 1, characterized in that said tag further indicates through which of said Main Path (AB, BC, CD, DE) or said Detour Path (ac, ce, bd) or both, starting
20 from the receiving router, said Path_Tear Message should be immediately forwarded towards said downstream-located router.

4. The release method according to claim 1, characterized in that, for said router receiving said Path_Tear Message, said release
25 method further comprises a step of releasing all the Label Switched Paths (LSP) arriving at this receiving router from upstream-located routers via said Main Path (AB, BC, CD, DE) and via said Detour Path (ac, ce, bd) linking said upstream-located routers and said receiving
30 router.

5. The release method according to claim 1, **characterized in that** said tag further indicates which Label Switched Paths (LSPs) to release, **and in that**, for the router receiving said Path_Tear Message, said release method comprises a step of releasing immediately each Label Switched Path indicated by said tag.

6. The release method according to claim 5, **characterized in that** said tag is a Sender Template whereof can be derived the Label Switched Paths to release.

7. A telecommunication network with a plurality of routers (A, B, C, D, E) interconnected via links through which Label Switched Paths (LSP) are established,
said routers being linked in cascade according to a Main Path (AB, BC, CD, DE) and being further linked in another order according to at least one Detour Path (ac, ce; bd),

and said routers being adapted to transmit a Path_Tear Message towards downstream-located routers, said Path_Tear Message indicating that a Label Switched Path (LSP) has to be released,

characterized in that the router transmitting said Path_Tear Message is adapted to include in said Path_Tear Message a tag indicating, to the router receiving said Path_Tear Message, whether said Path_Tear Message should be immediately forwarded towards a downstream-located router,

and in that the receiving router is adapted to detect said tag in said received Path_Tear Message, to release each Label Switched Path indicated by said tag, and, according to said tag, to forward immediately said Path_Tear Message towards said downstream-located router.

8. The telecommunication network according to claim 7,
characterized in that said tag further indicates through which path
said Path_Tear Message should be forwarded downstream,

5 **and in that**, according to said tag, said receiving router is
further adapted to forward immediately said Path_Tear Message
towards said downstream-located router through said Main Path (AB,
BC, CD, DE) or through said Detour Path (ac, ce, bd) or through both.

10 9. The telecommunication network according to claim 7,
characterized in that said receiving router is adapted to release all
the Label Switched Paths (LSPs) arriving at said receiving router from
upstream-located routers via said Main Path (AB, BC, CD, DE) and via
said Detour Path (ac, ce, bd) linking said upstream-located routers and
15 said receiving router.

10. The telecommunication network according to claim 7,
characterized in that said tag further indicates which Label
Switched Paths (LSPs) to be released,

20 **and in that** said receiving router is adapted to release
immediately each Label Switched Path indicated by said tag.

11. The telecommunication network according to claim 7,
characterized in that said receiving router is further adapted to
25 transmit, towards an upstream-located router, a Reserved_Tear
Message including a said tag,

in that said upstream-located router is adapted to transmit
said Reserved_Tear Message towards a downstream-located router,

and in that said downstream-located router is adapted

to immediately generate a Path_Tear Message including said tag,
and

to immediately forward said Path_Tear Message towards another
downstream-located router.

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12. The telecommunication network according to claim 7,
characterized in that both said Main Path (AB, BC, CD, DE) and at
least one Detour Path (ac, ce; bd) arrive at said receiving router.

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13. The telecommunication network according to claim 7,
characterized in that said telecommunication network is a Multi-
Protocol Label Switching [MPLS] telecommunication network.

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14. The telecommunication network according to any of the
claims 7 to 13, **characterized in that** said routers are adapted to
operate according to the release method as mentioned in any of the
claims 1 to 6.